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10/673,162	09/30/2003	Hiroshi Ogasawara	501.43126X00	9821

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ALEXANDRIA, VA 22314

EXAMINER

COLAN, GIOVANNA B

ART UNIT	PAPER NUMBER
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2162

DATE MAILED: 10/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/673,162

Applicant(s)

OGASAWARA ET AL.

Examiner

Giovanna Colan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 July 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is issued in response to the Amendment filed on 07/06/2006.
2. Claims 1 – 4, 6, 8 – 11, 13, and 15 – 19 were amended. No claims were canceled. Claim 19 was added.
3. This action is made Final.
4. Claims 1 – 19 are pending in this application.
5. Applicant's arguments with respect to claim 07/06/2006 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

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consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claim 1 – 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin et al. (US Patent No. 5,504,873, patented: April 2, 1996) in view of Akizawa et al. (US Patent No. 5,548,724, patented: August 20, 1996).

Regarding Claim 1, Martin discloses a storage device system comprising:

- a plurality of storage devices in which information is stored (Col. 2, lines 2 – 4, Martin);
- a storage device control section for controlling storage of information in said plurality of storage devices (Col. 2, lines 4 – 8, Martin¹);
- a connection unit connected to said storage device control section (Col. 4, lines 30 – 34, Martin); and
- a first processor (Fig. 2A, item 114, Control Processor, Martin) that is connected to a local area network (LAN) external to said storage device system (Fig. 2A, items 95 and 80, Col. 6 and 7, lines 50 – 53 and 22 – 30; respectively, Martin); and
- a second processor (Fig. 2A, item 116, Control Processor, Martin) that is connected to said storage device control section via said connection unit (Fig. 2A, item 110, Col. 8, lines 33 – 34 and 61 – 64, Martin), that accesses said plurality of storage devices via said connection unit and said storage device control section in response to

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data of the block access form issued from said first processor (Col. 4 and 17, lines 52 – 58 and 14 – 17; respectively, Martin), and that controls activation of said first processor (Col. 4, lines 48 – 59, “the controlling IFS notifies the control computer ...”, Martin²).

Martin further discloses a conversion step (Col. 5, lines 37 – 39, Martin).

However, Martin is silent with respect to converting data of a file access form received over said LAN into data of a block access form. On the other hand, Akizawa discloses the limitation just mentioned (Col. 4, 5, and 9, lines 38 – 41, 11 – 16, and 23 – 30; respectively, Akizawa³). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the Akizawa's teachings to Martin's system. Skilled artisan would have been motivated to do so, as suggested by Akizawa (Col. 1, lines 58 – 61, Akizawa), to distribute the load of files by improving the access throughput. Skilled artisan would further be motivated to use this file conversion to provide an improved transmission of files between different networks. In addition, Martin's system and Akizawa's system are analogous art because they are from the same field of endeavor, such as, database management systems and file access control.

Regarding Claim 2, the combination of Martin in view of Akizawa discloses a storage device system, further comprising a second communication control section

¹ Wherein the step of maintaining a directory of each storage element corresponds to the step of controlling storage information as claimed.

² Wherein the step of initializing corresponds to the activation disclosed in the claim.

³ Wherein the step of dividing into four sections corresponds to the step of converting into block access form claimed; wherein the areas 1-1, 1-2, 1-3, and 1-4 correspond to the block access form claimed; and

connected on a second network external to said storage device system (Fig. 1, item 210, Col. 4, lines 28 – 30, communication control, Akizawa⁴), wherein:

wherein said first communication control section is formed with the same circuit board as said second communication control section is (Fig. 1, item 900, Col. 4, lines 25 – 30, Martin).

Regarding Claim 3, the combination of Martin in view of Akizawa discloses a storage device system, wherein:

said first processor diagnoses the hardware thereof (Col. 6, lines 5 – 9, Martin);

wherein said second processor issues a request for start of hardware diagnosis of said first processor to said first processor (Col. 7, lines 4 – 7, Martin).

Regarding Claim 4, the combination of Martin in view of Akizawa discloses a storage device system, further comprising:

a management terminal connected to each of said first and second processors (Fig. 2A, item 114, 116, and 19, Control Processors and Interface Subsystem, Col. 5, lines 16 – 20, Martin),

wherein said second processor issues a request for start of first processing to said first processor (Col. 4, lines 50 – 52, receives a request to read or write data, Martin⁵; and Col. 3, lines 7 – 8 and 11 – 15, Akizawa); and

wherein the received file access request, the file attribute table, and the load information table correspond to the file access form claimed.

⁴ Wherein Fig. 1, item 200 corresponds to the first communication control section as claimed. And Fig. 1, item 210 corresponds to the second communication control section as claimed.

wherein said first processor acquires first software from said management terminal in response to the first processing start request issued from said second processor (Col. 4, lines 57 – 59, Martin; and Col. 3, lines 5 – 6 and 8 – 9, Akizawa).

Regarding Claim 5, the combination of Martin in view of Akizawa discloses a storage device system, wherein said first processor acquires second software from said management terminal under the control of the first software acquired from said management terminal (Col. 4, lines 51 – 52 and 57 – 59, read data, resources are de-allocated, Martin), and writes the second software in said plurality of storage devices via said connection unit and said storage device control section (Col. 4, lines 51 – 52, write data, Martin).

Regarding Claim 6, the combination of Martin in view of Akizawa discloses a storage device system, wherein:

wherein said second processor issues a request for start of second processing to said first processor (Col. 4, lines 50 – 52, Martin; and Col. 3, lines 11 – 15, Akizawa);

said first processor acquires the second software written in said plurality of storage devices via said connection unit and said storage device control section in response to the second processing start request issued from said second processor (Col. 4, lines 57 – 59, Martin; and Col. 3, lines 7 – 9, Akizawa).

⁵ Wherein the step of receiving a request by the first processor implies step of issuing a request by a

Regarding Claim 7, the combination of Martin in view of Akizawa discloses a storage device system, wherein both the first processing start request and second processing start request contain time instant information (Col. 16, lines 21 – 24, Martin; and Col. 5, lines 53 – 56, Akizawa).

Regarding Claim 8, the combination of Martin in view of Akizawa discloses a storage device system, wherein:

said first communication control section includes a storage device in which third software is stored (Col. 6, lines 5 – 6, system software, Martin⁶; and Fig. 3, item 604, Col. 5, lines 7 – 8 and 22 – 25, Akizawa⁷) and ;

wherein said first processor activates the third software so as to activate said first communication control section (Col. 5 lines 22 – 24, Martin⁸), and waits for a request issued from said second processor (Col. 5, lines 23 – 26, Martin⁹).

Regarding Claim 9, the combination of Martin in view of Akizawa discloses a storage device system, further comprising a second communication control section that is connected on a second network external to said storage device system, wherein:

second processor.

⁶ Wherein the system software corresponds to the third software store; and the disk drive (Fig. 2A, item 80, Martin) corresponds to the storage device.

⁷ Wherein the file storage access unit access program (Fig. 3, item 604, Akizawa) corresponds to the third software; and the master file server (Fig. 3, item 100, Akizawa) corresponds to the storage device claimed.

⁸ Wherein examiner interprets the step of delivering information as a step for activating the software.

⁹ Examiner interprets the step of delivering information when access is made to the storage device as a step of waiting for request to be issued.

wherein said first communication control section is formed with the same circuit board as said second communication control section is (Fig. 1, item 900, Col. 4, lines 25 – 30, Martin).

Regarding Claim 10, the combination of Martin in view of Akizawa discloses a storage device system, wherein:

said first processor diagnoses the hardware thereof (Col. 6, lines 5 – 9, Martin);
and

wherein said second processor issues a request for start of hardware diagnosis of said first processor to said first processor (Col. 7, lines 4 – 7, Martin).

Regarding Claim 11, the combination of Martin in view of Akizawa discloses a storage device system, further comprising a management terminal connected to each of said first communication control section and said second communication control section, wherein:

wherein said second processor issues a request for start of first processing to said first processor (Col. 4, lines 50 – 52, receives a request to read or write data, Martin¹⁰; and Col. 3, lines 7 – 8 and 11 – 15, Akizawa); and

wherein said first processor acquires first software from said management terminal in response to the first processing start request issued from said second processor (Col. 4, lines 57 – 59, Martin; and Col. 3, lines 7 – 9, Akizawa).

Regarding Claim 12, the combination of Martin in view of Akizawa discloses a storage device system, wherein said first processor acquires second software from said management terminal under the control of the first software acquired from said management terminal (Col. 4, lines 51 – 52 and 57 – 59, read data, resources are de-allocated, Martin), and writes the second software in said plurality of storage devices via said connection unit and said storage device control section (Col. 4, lines 51 – 52, write data, Martin).

Regarding Claim 13, the combination of Martin in view of Akizawa discloses a storage device system, wherein:

said second processor issues a request for start of second processing to said first processor (Col. 4, lines 50 – 52, Martin; and Col. 3, lines 11 – 15, Akizawa); and

wherein said first processor acquires the second software written in said plurality of storage devices via said connection unit and said storage device control section in response to the second processing start request issued from said second processor (Col. 4, lines 57 – 59, Martin; and Col. 3, lines 7 – 9, Akizawa).

Regarding Claim 14, the combination of Martin in view of Akizawa discloses a storage device system, wherein both said first processing start request and said second

¹⁰ Wherein the step of receiving a request by the first processor implies step of issuing a request by a second processor.

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processing start request contain time instant information (Col. 16, lines 21 – 24, Martin; and Col. 5, lines 53 – 56, Akizawa).

Regarding Claim 15, the combination of Martin in view of Akizawa discloses a method of activating a storage device system that comprises a plurality of storage devices in which information is stored (Col. 2, lines 2 – 4, Martin), a storage device control section which controls storage of information in said plurality of storage devices (Col. 2, lines 4 – 8, Martin¹¹), a connection unit connected to said storage device control section (Col. 4, lines 30 – 34, Martin),

a first processor that is connected to a local area network (LAN) external to said storage device system (Fig. 2A, items 95 and 80, Col. 6 and 7, lines 50 – 53 and 22 – 30; respectively, Martin) and that converts data of a file access form received over said LAN into data of a block access form (Col. 4, 5, and 9, lines 38 – 41, 11 – 16, and 23 – 30; respectively, Akizawa¹²), and a second processor that is connected to said storage device control section via said connection unit (Fig. 2A, item 110, Col. 8, lines 33 – 34 and 61 – 64, Martin), and that accesses said plurality of storage devices via said connection unit and said storage device control section in response to the data of the block access form issued from said first processor (Col. 4 and 17, lines 52 – 58 and 14 – 17; respectively, Martin); said method comprising the steps of:

¹¹ Wherein the step of maintaining a directory of each storage element corresponds to the step of controlling storage information as claimed.

¹² Wherein the step of dividing into four sections corresponds to the step of converting into block access form claimed; wherein the areas 1-1, 1-2, 1-3, and 1-4 correspond to the block access form claimed; and wherein the received file access request, the file attribute table, and the load information table correspond to the file access form claimed.

controlling, by said second processor, activation of said first processor (Col. 4, lines 48 – 59, “the controlling IFS notifies the control computer ...”, Martin¹³);

issuing, by said second processor, a request for start of hardware diagnosis of said first processor to said first processor (Col. 6, lines 5 – 9, Martin); and

performing, by said first processor, hardware diagnosis in response to the hardware diagnosis start request issued from said second processor (Col. 7, lines 4 – 7, Martin).

Regarding Claim 16, the combination of Martin in view of Akizawa discloses a method, said method further comprising the steps of:

issuing, by said second processor, a request for start of first processing to said first processor (Col. 4, lines 50 – 52, receives a request to read or write data, Martin¹⁴; and Col. 3, lines 7 – 8 and 11 – 15, Akizawa); and

acquiring, by said first processor, first software from said management terminal in response to the first processing start request issued from said second processor (Col. 4, lines 57 – 59, Martin; and Col. 3, lines 5 – 6 and 8 – 9, Akizawa).

Regarding Claim 17, the combination of Martin in view of Akizawa discloses a method, further comprising the steps of:

acquiring, by said first processor, second software from said management terminal under control of the first software acquired from said management terminal

¹³ Wherein the step of initializing corresponds to the activation disclosed in the claim.

(Col. 4, lines 51 – 52 and 57 – 59, read data, resources are de-allocated, Martin), and writing the second software in said plurality of storage devices via said connection unit and said storage device control section (Col. 4, lines 51 – 52, write data, Martin).

Regarding Claim 18, the combination of Martin in view of Akizawa discloses a method, further comprising the steps of:

issuing, by said second processor, a request for start of second processing to said first processor (Col. 4, lines 50 – 52, receives a request to read or write data, Martin¹⁵; and Col. 3, lines 7 – 8 and 11 – 15, Akizawa); and

acquiring, by said first processor, the second software written in said plurality of storage devices via said connection unit and said storage device control section in response to the second processing start request issued from said second processor (Col. 4, lines 57 – 59, Martin; and Col. 3, lines 5 – 6 and 8 – 9, Akizawa).

Regarding Claim 19, the combination of Martin in view of Akizawa discloses a storage device, wherein said first and said second processors form part of a first communication control section (Col. 4, lines 48 – 59, the control subsystem, Martin).

¹⁴ Wherein the step of receiving a request by the first processor implies step of issuing a request by a second processor.

¹⁵ Wherein the step of receiving a request by the first processor implies step of issuing a request by a processor.

Response to Arguments

1. Applicant cannot show non-obviousness by attacking references individually where, as here, the rejections are based on a combination of references.

In re Keller, 208 USPQ 871 (CCPA 1981).

2. Applicant argues that the prior art fails to disclose the newly added limitation; “a first processor that is connected to a local area network (LAN) external to said storage device system; and

a second processor that is connected to said storage device control section via said connection unit , that accesses said plurality of storage devices via said connection unit and said storage device control section in response to data of the block access form issued from said first processor, and that controls activation of said first processor”.

Examiner respectfully disagrees. The applied prior art does disclose this newly added limitation (See 103 rejection Claim 1 in this office action above).

3. Applicant argues that the prior art fails to disclose the newly added limitation; “converting information of a first form received over the external network into information of a second form.”

Examiner respectfully disagrees. The limitation and specific wording including “first form” and “second form” is not disclosed by the claim language. However, the combination of Martin in view of Akizawa does disclose converting information of a first form received over the external network into information of a second form (Col. 5 and 6,

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lines 11 – 16 and 42 – 45, “after protocol conversion”, Akizawa). Also, see 103 rejections claim 1 in this office action above.

Prior Art Made Of Record

1. Martin et al. (US Patent No. 5,504,873, patented: April 2, 1996) discloses a mass data storage and retrieval system.
2. Akizawa et al. (US Patent No. 5,548,724, patented: August 20, 1996) discloses a file server system and file access control method of the same.
3. Beardsley et al. (US Patent No. 6,513,097 B1) disclose a method and system for maintaining information about modified data in cache in a storage system for use during a system failure.

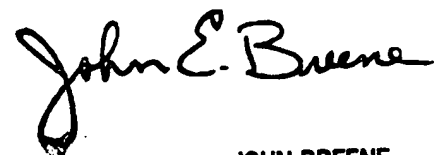
Points Of Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Giovanna Colan whose telephone number is (571) 272-2752. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Giovanna Colan
Examiner
Art Unit 2162
September 14, 2006



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